Balancing Bark Beetle Harvesting with Other Resource Values at Babine Lake

Complaint Investigation 010352

FPB/IRC/82

September 2002

Table of Contents

The Investigation 1

Background 1

Issues 2

Discussion 3

Conclusions 10

Commentary 10

The Investigation

Background

The owner of a fishing lodge (complainant) was concerned about logging that Canadian Forest Products Ltd. (the licensee) was conducting near the shore of Babine Lake, one of the largest lakes in northern British Columbia. The owner feels that logging to control a beetle infestation has damaged the scenic value of the area for lodge clients and for local people who fish on the lake.

The fishing lodge is on Morrison Arm, at the northeast shore of Babine Lake. It is accessed by boat from the community of Granisle. The area has been extensively harvested in the past, and many cutblocks on surrounding hill slopes are visible from the lake. The forest is predominantly spruce with some pine throughout. Recent spruce bark beetle and mountain pine beetle infestations have damaged many stands.

Bark beetle infestations were first detected in the Morrison Arm area when the Ministry of Forests (MOF) conducted overview flights in the late summer of 1999. According to the district manager, there was a dramatic increase in the spruce bark beetle population between the summer of 1999 and late 2000. MOF's strategy document for controlling bark beetle infestations in the Morice Forest District indicates that significant volumes of spruce and pine are at risk of beetle attack in the North Babine and adjacent landscape units. The strategy calls for aggressive suppression to manage beetles, applying all possible treatments, at each infested site. This strategy is designed for areas that are at a low level of infestation.

The licensee carried out reconnaissance mapping of the infestation in March 2000, and detailed beetle probes in the summer of 2000. In October 2000, the licensee submitted a major amendment to its forest development plan (FDP) to harvest the beetle-infested trees. The district manager approved the amendment on November 24, 2000. Amendment 17 contained 57 cutblocks, 21 of which were larger than 60 hectares. Four cutblocks were within the vicinity of the fishing lodge and were of most concern to the complainant.

The licensee logged the approved cutblocks in March 2001. At the same time, the licensee logged a large number of small-scale salvage patches of less than one hectare each throughout the area. These were not included in the FDP amendment.

The complainant had previously complained to the Board about the FDP amendment in 2000. That complaint asserted that the amendment did not ensure adequate management and conservation of wildlife habitat, biodiversity and forest health, and that it would affect the business of the lodge. The Board investigated and reported its findings in January 2002, after the cutblocks and salvage patches were harvested. (See *Timber Harvesting and Fishing Lodge Interests near Morrison Arm*). The Board concluded that the district manager had considered wildlife values and the lodge's business and that there was sufficient

information about biodiversity in the amendment to approve it. The Board also concluded that the licensee had met the requirements of the *Forest Practices Code of British Columbia Act* and related regulations (the Code) for identifying forest health problems and that the amendment proposed ways to reduce the risk and impacts caused by the beetles. The Board stressed the need for strategic planning in this area because of the beetle infestation and the numerous resource values around Babine Lake. At present, public input into forest management is restricted as no completed land and resource management plan or landscape-level plans or objectives are in place.

Despite the Board's findings in that investigation, the complainant continued to have concerns about the impact of the logging on her lodge business, forest health and wildlife. The complainant continued to feel that her concerns were not adequately addressed, despite numerous discussions with the licensee and MOF. She believed that the silviculture prescriptions (SPs) and the harvesting were not consistent with the commitments made in the FDP amendment and that debris-piles from the harvesting had been burned late, increasing the risk of more beetle infestations. She filed a second complaint with the Board about the four cutblocks near her lodge in late 2001.

The gross area of the four cutblocks ranged from 7 to 220 hectares, however, the actual area to be harvested ranged from 2 to 40 hectares in small-patch clearcuts. Infestation levels within the gross area of the cutblocks ranged from 2 percent to 17 percent in spruce and 4 percent to 7 percent in pine. The harvesting targeted concentrated pockets of infestations within the cutblock areas.

In 2002, the complainant filed a third complaint regarding another FDP amendment. The issues in that complaint were similar to the previous complaints, but related to different cutblocks. The complainant also asserted that she was not given a promised 30-day opportunity to review and comment on the SPs. The Board decided to investigate the review and comment issue from the third complaint concurrently with its investigation of issues from the second complaint.

MOF currently believes the spruce bark beetle infestation is declining in the Babine Lake area. Spruce bark beetle infestations usually last for five to seven years. However, the mountain pine beetle infestation is continuing to increase.

Issues

The Board investigation focused on the following questions:

1. Were the SPs consistent with the district manager's requirements for visual-impact assessments, additional pest incidence information and a wildlife review?

2. Did the district manager appropriately consider the complainant's business in the approval of the SPs?

3. Was the disposal of debris-piles adequate to manage the beetle infestation?

4. Was the complainant's opportunity to review and comment on the SPs adequate?

Discussion

Were the SPs consistent with requirements made in the district manager's approval of the FDP amendment?

The Board considered three requirements relating to cutblocks 038, 039, 042 and 044 that were stated in the FDP amendment 17 approval.

1. The district manager required a visual-impact assessment be done on the cutblocks.

2. The district manager required more detailed beetle information.

3. The licensee committed to having a professional biologist review the plan for the cutblocks for wildlife habitat needs.

Visual-impact assessment

The complainant offers a wilderness fishing experience and was concerned that client satisfaction would be seriously diminished if cutblock openings were visible from the lake. The two smallest cutblocks, 038 and 039, are within a 200-metre lakeshore management zone.

The Code does not require a riparian reserve zone on lakes, such as Babine Lake, that are larger than 1,000 hectares. The licensee prescribed riparian reserve zones of 15 metres in one cutblock and 20 metres in the other. The licensee was attempting to mitigate the visual-impacts, but it still had to take out infested trees to deal with the beetle infestation.

The district manager can establish a visual quality objective (VQO) under the Code, to guide planning and manage visual-impacts on the landscape. There are five classes of VQOs: preservation, retention, partial-retention, modification, and maximum modification. The objectives range from no visible activities (preservation), to activities are dominant (maximum modification).

MOF has not established a VQO under the Code for this area, however, district policy indicates that a visual quality objective of partial-retention (activities are visible but remain subordinate) is appropriate. The complainant asserted that the visual landscape along Morrison Arm was already at a maximum modification level because of past harvesting. She believes that there should be no further harvesting until the viewscape recovers to the point where visual disruption approximates that of partial-retention. However, MOF regional staff from the visual management program maintain that maximum modification need not

preclude further development as long as this development does not delay achievement of the long-term objective. MOF considers that to be the case along Morrison Arm.

It is the Board's opinion that when an area has reached such a level of disturbance from harvesting, additional harvesting should meet a preservation or retention-level impact (activities are not visually evident) in order to the improve the overall visual landscape. However, the Board also recognizes that with a forest health issue, such as a bark beetle infestation, it may be difficult to achieve these VQO objectives and still protect forest resources. When resource values conflict as these do, it becomes necessary to weigh all of the risks associated with visual management and forest health to try to achieve a balance.

In response to the complainant's concerns, the district manager required the licensee to conduct a visual-impact assessment for the four cutblocks to ensure that the partial-retention objective would be achieved. The assessments predict the visibility of cutblocks from specific locations, usually major travel corridors. The licensee completed the visual-impact assessments and reported the results in the SPs.

The district manager, in reviewing the SPs, was satisfied that the harvesting would achieve the visual quality objective of partial-retention and would not delay achieving partial-retention across the overall landscape.

Board staff viewed the harvested cutblocks from the lake from a similar perspective to what a person in a boat would see, and found that the cutblocks were consistent with the retention class and, therefore, met the partial-retention objective. The Board concludes that the commitment to complete a visual assessment was met and the intent to minimize the impacts on the lodge and its business was also met.

Beetle information

The district manager approved the FDP amendment with a condition that the licensee collect more detailed information about the presence of beetles in the four cutblocks. The licensee completed ground-based pest incidence surveys for those cutblocks. The survey methodology was consistent with recommendations in the *Bark Beetle Guidebook*. Board staff reviewed the survey information and found that the SPs targeted logging areas that were beetle-infested. The SPs also included other areas for logging within the cutblocks. These are infestation sites, additional to those detected in the pest-incidence surveys that the licensee found later during the layout of the cutblock. This can be expected because the surveys only sample part of the stand and are not intended to capture all points of infestation. The Board concludes that the licensee met the requirements to gather more detailed beetle information, and that the SPs were consistent with that information.

Wildlife review

The Ministry of Environment, Lands and Parks (MELP, now Ministry of Water, Land and Air Protection), in its review comments for the 2000 FDP amendment, recommended that a

qualified professional assess the wildlife habitat values in the cutblocks. In the amendment, the licensee committed to have an appropriate professional review the stand level plans to ensure wildlife objectives were met. The district manager's approval of the amendment required the licensee to either submit the information from the review or indicate how the results were incorporated into the SPs.

The SPs include wildlife objectives to maintain wildlife connectivity corridors along the lake and to maintain moose winter range. The licensee hired a professional biologist to review the SPs relative to those objectives. The biologist reviewed the SPs as well as photographs giving a panoramic view of the area. He had been in the field earlier in 2000 with the licensee to discuss moose habitat requirements, but had not viewed these specific cutblocks.

On February 20, 2001, the biologist reported his conclusions on achievement of the SP objectives in an email message to the licensee. He made very general conclusions stating that the connectivity corridors and wildlife tree patches, in proximity to early seral areas, would provide a valuable mosaic of cover and food sites. MELP staff considered the information in the email to be inadequate to cause them to either agree or disagree with the findings. However, MELP staff also said that their concerns appeared to have been addressed in the SPs for two of the cutblocks.

In his rationale for approving the SPs, the district manager commented that the primary wildlife values in the area were for wildlife movement and potential moose winter range. He was satisfied that the high level of retention proposed would minimize any impact on movement corridors and winter range along Babine Lake. He noted that his conclusion was supported by information provided by MELP. He also commented that the biologist's email created confusion and added little to help him in his review of the plan. Therefore, his approval did not rely on the email provided by the professional biologist. He found that the SPs contained enough information for him to be satisfied that there were no significant wildlife issues.

The Board interprets that MELP intended that there be an actual on-site field assessment and a more comprehensive report. However, there was no such commitment made by the licensee and no specific requirement for such a report by the district manager. The actual commitment was only to have a biologist review the SPs, not go into the field and conduct an on-site wildlife assessment. This did not provide MOF, MELP or the complainant with an opportunity to understand what the biologist had considered. The complainant was not satisfied, as she had expected that she would have an opportunity to see the results of the wildlife review. From her perspective, the communication on this issue was not clear. She did not understand that MELP's request would not be followed through with fieldwork and a report as MELP had intended.

Board staff with wildlife habitat expertise viewed the harvested cutblocks in the field. The harvested patches were relatively small and dispersed across the landscape. These would likely provide new areas for moose to browse. All patches had adequate forest cover nearby.

Except for the two smallest cutblocks, 038 and 039, the patches were more than 100 metres back from the lake. Board staff concluded that the SPs were consistent with management practices to provide adequate habitat for food, security and movement. The Board finds that the SPs adequately addressed the moose winter range and connectivity values within the cutblocks.

Overall, the Board concludes that the SPs were consistent with the district manager's requirements made in the FDP amendment approval letter. The required assessments were conducted, and more importantly, the results were incorporated into the SPs. Regarding the wildlife review issue, the Board notes that in areas like Morrison Arm where there are other important resource values and resource users, clear communication between parties is critical to ensure that all parties have a common understanding of the expected results.

Did the district manager appropriately consider the complainant's business in the approval of the SPs and the small-scale salvage patches?

To answer this question, the Board considered the Code's requirements for identifying and addressing stakeholder concerns as they apply to: i) SPs and ii) small-scale salvage patches.

Silviculture prescriptions

The general location and size of the four cutblocks were approved at the FDP amendment stage. That planning stage is when significant impacts on local business interests should be considered. The Board investigated how this was considered during the FDP amendment stage in the Board's previous report *Timber Harvesting and Fishing Lodge Interests near Morrison Arm*. The issue was not re-examined in this investigation.

Once such impacts are considered during FDP amendment approval, the Code does not require licensees to also make SPs available to the public for review and comment. However, the district manager can require a licensee to refer an SP to "any person that may be materially affected" (section 7 of the *Operational Planning Regulation)*. In this case, the district manager required the licensee to refer the SPs for the four cutblocks to the complainant for review and comment. The complainant provided comments related to wildlife, windthrow, retention levels in the cutblocks, restricting harvesting to attacked trees and having an aggressive trap-tree program. The licensee informed the district manager of the comments and how these were addressed. The licensee agreed to increase retention along a non-classified drainage in the cutblock closest to the lodge and in cutblocks closer to the lake. The licensee also agreed to remove or relocate skid trails to reduce the harvest of non-infested trees. The district manager wrote a detailed rationale for approving the SPs, in which he discussed the complainant's concerns and how they were addressed. The district manager also required a visual-impact assessment for these cutblocks because of the complainant's concerns.

In summary, the consideration of business interests would occur mainly at the FDP amendment stage. Here, the district manager also required the licensee to refer the SPs to

the complainant and to complete a visual-impact assessment. The district manager reviewed the SPs to ensure that they adequately addressed the visual-impact assessment and referral comments. The licensee had made changes to reduce the visual-impacts of the cutblocks. The district manager's rationale showed that he was aware of the complainant's concerns and gave consideration to how these were addressed. The Board, therefore, concludes that the district manager appropriately considered the complainant's business concerns in approving the SPs.

Small-scale salvage patches

In addition to the four approved cutblocks, the licensee harvested numerous small patches, each less than one hectare, spread over the area between the cutblocks and in the vicinity of the lodge. The complainant was not aware of this until the patches were harvested.

Small-scale salvage patches are a tool for addressing small sites of beetle infestation and were proposed by the licensee through salvage site plans. Salvage site plans are not "operational plans" under the Code. There are no Code requirements for a district manager to identify and address stakeholder concerns about salvage site plans or to refer these plans to the public. The licensee was exempted from the requirement for an SP for these sites under section 30 of the Act. The district manager could have used section 40 of the *Operational Planning Regulation* to require the licensee to refer salvage plans to the complainant but did not in this case.

The district manager intended that the complainant be kept informed of harvesting plans, regardless of the Code requirements. However, that did not happen for the small-scale salvage patches. The licensee was not required to refer the plans and district staff failed to realize that the some of the proposed small-scale salvage patches were close to the lodge. In one case, a salvage patch was located in an area that had been previously identified by the complainant and the district manager as important for maintaining visual cover from the lake.

The salvage patches were small (each less than one hectare) and the objective of harvesting these was reasonable (to harvest infested trees) and matched the district plan for an aggressive strategy to control the beetles. Although there was no legal requirement to consider the complainant's business with the small-scale salvage patches, the district manager set an expectation that the complainant would be informed of all harvesting plans. This expectation was not met. MOF has since amended its operating procedures so that the licensee will now routinely identify whether there are any stakeholders affected by a salvage site plan, and what steps have been taken to address concerns.

Was the disposal of debris-piles in the cutblocks and the small-scale salvage patches adequate to manage the beetle infestation?

Harvesting of the four cutblocks and the small-scale salvage patches began in early March 2001, and was mostly completed that same month, approximately 18 months after the beetle

infestation was first detected. Large pieces left in debris-piles in both the cutblocks and the small-scale salvage patches would likely have contained beetle larvae. The Code requires roadside and landing debris that is infested with insects to be burned before the beetles emerge in the summer (section 19 of the *Timber Harvesting Practices Regulation* (THPR)). Debris-piles in the four cutblocks were burned in April 2001, however, burning was incomplete in two cutblocks. No debris-piles in the small-scale salvage patches were burned until the fall. Therefore, beetles in the unburned debris-piles would have emerged in the summer of 2001.

The licensee said that burning the debris-piles immediately after harvesting was difficult because the harvesting began late in the winter. Burning the piles could create a fire hazard because of the changing weather conditions. Therefore, the licensee applied for an exemption to section 19 of the THPR so that piles from the small-scale salvage patches could be burned after the summer beetle flight. The licensee did not request an exemption for the disposal of the remaining debris-piles in the two cutblocks.

Spruce bark beetles prefer downed trees. The licensee intended to fall trap-trees nearby to capture beetles that emerge from the debris-piles and surrounding stands. These trees would then be removed from the site. The licensee believed that the trap-tree program would be adequate to contain beetles that would emerge from the debris-piles. The licensee also believed that the number of beetles in the debris would be insignificant compared to the beetles that potentially remained in the surrounding stands and in stumps in the harvested cutblocks.

The district manager accepted this argument and approved the exemption for the small-scale salvage patches. However, his approval letter indicated that he was concerned with the scope and the timing of the request. There were numerous debris-piles left from the harvesting, and the request was received after the weather window to burn the debris-piles had already passed. The district manager said he expected the licensee to complete its debris disposal requirements within the given time period in the future.

For the two cutblocks where debris-piles were incompletely burned, the licensee had a choice between creating a possible fire hazard and delaying the burning to the fall. However, even where MOF and the licensee informally agreed to leave a debris-pile in one cutblock as a screen for the complainant, an exemption under section 19 of the THPR would still be required. With no exemption, the licensee did not comply with section 19 of the THPR. However, the result of the delay in burning the debris-piles in the cutblocks and small-scale salvage patches was probably not significant. The infestation rate in the stand was not large; the harvest effort was to prevent the attack from getting worse. There was a trap-tree program in place. The *Bark Beetle Guidebook* recommends trap-trees as acceptable to deal with light to moderate beetle infestations.

The licensee found itself in a situation with conflicting hazards. The Board concludes that it was reasonable for the fire hazard to take precedence over the beetle hazard in the decision

to delay debris-pile burning. Although this was not optimal to control the beetle, it was adequate given the backup trap-tree program.

Was the complainant's opportunity to review and comment on the SPs adequate?

In 2001, the licensee submitted another FDP amendment for additional cutblocks in the Morrison Arm area to deal with beetle infestations. When the district manager approved that amendment, he directed the licensee to refer the SPs for two cutblocks to the complainant for a minimum 30-day review and comment period.

One referral was sent December 3, 2001, and the complainant said that she received it on December 6 or 7. The referral letter said that the licensee intended to have her comments incorporated into a final SP by January 4, 2002. The complainant considered that an inadequate period. She did not have a full 30 days because a holiday season intervened and she was not able to reach government staff to ask questions. Therefore, she asked the district manager for an extension to the review period. The district manager refused because many of her previous comments had already raised site-level concerns. Also, because of the beetle infestation, he did not want to delay harvesting. He noted that the licensee was prepared to adjust the SP to try to address any concerns that she raised after the approval.

The complainant received the second referral on December 21, 2001. Although that was two weeks after she received the other SP, she assumed that the comments for both cutblocks were due January 4, 2002. She was able to consult with Ministry of Water, Land and Air Protection staff shortly before sending her comments on both cutblocks, which she did on January 2, 2002.

The licensee intended the complainant to have a full 30 days to review the SPs. The licensee considered January 4 to be a goal based on the courier's estimated time for delivery of the SP to the complainant. The licensee explained that the complainant could have taken longer if she had asked. The Board accepts that this was the licensee's intent, but it was not clear to the complainant.

The complainant's view that the referral over the holiday season was inconvenient and restricted her access to government staff is reasonable. The opportunity could have been better for the complainant, but given the operational time pressures to deal with the beetle issue, and given that she had already provided extensive comments at the FDP amendment stage, the Board concludes that the review opportunity was adequate.

Conclusions

1. The SPs were consistent with requirements in the approval of the FDP amendment for a visual-impact assessment, additional pest incidence information and a wildlife review. The wildlife review did not meet the expectations of agencies and the complainant, however, in the Board's opinion the SPs adequately addressed moose winter range and connectivity.

2. The district manager appropriately considered the complainant's business interests when he approved the SPs. There was no Code requirement to consider the complainant's business with the small-scale salvage patches, however, the district manager set an expectation that the complainant would be informed of harvesting plans and this expectation was not met.

3. The delay in disposal of the debris-piles was reasonable given the fire-hazard situation and the backup trap-tree program.

4. The opportunity to review the SPs was adequate given the operational pressures to deal with the beetle issue. The complainant was able to provide comments within the time provided.

Commentary

Bark beetles are integral in forest ecosystems and therefore can be viewed as beneficial or detrimental depending on the management objectives of the forest user. Most bark beetles cause little or no economic damage, as they normally utilize standing dead and severely weakened trees or downed material. Bark beetle outbreaks into living trees appear to be increasing in many areas of the province. The reason for this increase may be natural or human-caused.

In some ecosystems, fire-prevention policies have interfered with natural bark beetle cycles by interfering with the natural fire frequency. In other ecosystems, many stands are reaching late successional stages and are simply being recycled by the beetle. Beetle management should reflect the ecosystem, present management objectives for a range of forest users, and recognition of past management practices.

In this case, there were two situations in which management strategies had different objectives. Management of visual resources, especially important to a lodge owner, did not match the objectives of the Crown to control bark beetle. Management of a potential fire-hazard risk did not synchronize with the objective to suppress a bark beetle population, reducing the risk of further spread.

Resource management decisions require balancing many different objectives for forest resource use. Careful decisions require identifying risks, making decisions based on facts, and communicating to all involved parties. Often, these decisions require tradeoffs between resource values. The Board recognizes that managing for many uses on the same piece of land is a delicate balancing exercise; one that often results in one or more objectives not being fully met, and one or more parties not being satisfied with the result.

Land-use planners must consider, plan and recognize how desired land-use objectives should change in response to possible catastrophic events such as the bark beetle or fires. A land-use plan should identify potential risks, indicate whether the risk is acceptable, provide tradeoffs to manage those risks if they are not acceptable, and have an action plan to address that risk when it arises. With such a planning regime in place, complaints such as this one should diminish.